

REMARKS

This Amendment is submitted in response to the December 31, 2003 final Office Action issued in connection with the above-identified patent application. By this Amendment, claims 10 and 22 have been amended as shown above. Upon entry of this Amendment, the pending claims will be amended independent claim 10, with claims 11-21 depending therefrom, and amended independent claim 22, with claims 23-25 depending therefrom. It is respectfully requested that the Examiner review and consider the foregoing amendments in view of the following remarks.

Initially, the undersigned reminds the Examiner that a draft of this Amendment was faxed to the Examiner for consideration prior to the formal filing thereof. The undersigned thanks the Examiner for discussing this Amendment during a February 26, 2004 telephone interview wherein the Examiner indicated that the claim amendments purport to overcome the primary references relied upon in the final Office Action in rejecting the claims.

Turning first to the formal matters, the Examiner has objected to the drawings because they fail to show a clamp feature as recited in claim 16. Upon review of the drawings, it is noted that the clamp feature is represented as element 15 in FIGs. 6, 7 and 8. Element 15 had previously been described as "holders" in paragraph 28 of the originally-filed specification. Paragraph 28 has now been amended to recite "holders or clamps". These clamps 15 which are disposed at the distal ends of the side walls 17 engage the underside of the multi-well plate when the lid is affixed thereto in its intended manner (see, for example, FIG. 8). Accordingly, it is believed that the objection to the drawings has now been overcome by amending the specification to be in agreement with the existing drawings.

Claim 22 has been objected to because "the multi-well plate having a plurality of wells has been recited twice." In response, claim 22 has been amended by changing, in line 6

thereof, the third occurrence of "a" to -- said-- . Accordingly, it is believed that this objection to claim 22 has also now been overcome.

In the Office Action the Examiner has also rejected claims 10, 16, 20-22, 24 and 25 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. In particular, the Examiner has rejected the aforementioned claims on the grounds that there is insufficient disclosure in the originally-filed application for the lid and side-walls being made of "resiliently flexible material." In response, the Examiner is advised that the originally-filed application specifically recites that the metal lid 3 can be "spring steel" or "stainless spring steel". See, for example, paragraph 26, line 4 of the specification. See also, paragraph 28, lines 1-2 of the specification which explains that the end view of FIG. 5 "serves to illustrate the spring nature of said cover". The term "spring" is defined as "1 to move suddenly and rapidly ... (d) to move as a result of resilience ...". Webster's New World College Dictionary, third edition, p. 1298 (© 1997) (see enclosed p. 1298). Thus, the "resiliently flexible material" limitation of the claims is believed to be supported by the specification. Therefore, this rejection should be withdrawn.

The Examiner has also rejected claims 20 and 24 because these claims recite a feature that "a point of the gasket...the multi-well plate", which the Examiner believes is not supported by the originally-filed specification. Applicants respectfully disagree. With reference to FIG. 6, for example, it is shown that the upper surface 19 of the cover 3 is curvilinear and the gasket 23 is disposed on the lower surface of the curvilinear section 19. When the cover is mounted to the multi-well plate, the gasket is, in effect, sandwiched between curvilinear section 19 and the upper surface of the multi-well plate (see FIG. 8). Thus, due to the shape of the curvilinear section 19 and the compressible material of the gasket 23, a center portion of the gasket 23 will contact a center region of the upper surface of the multi-well plate (see FIG. 6 which shows a curved gasket 23).

Once the lid 3 is flattened in the intended manner so as to allow clamps 15 to engage the undersides of the multi-well plate, the gasket will also flatten out and seal off the surface of the multi-well plates. This feature is specifically recited in claims 21 and 25. Accordingly, it is believed that this rejection has also been overcome.

Turning now to the claim rejections based on prior art, the Examiner has rejected claims 10, 16, 22 and 23 as allegedly anticipated under 35 U.S.C. §102(e) by U.S. Patent No. 6,436,351 (Gubernator et al.). Claims 10-15, 17, 18 and 20-25 have also been rejected as allegedly anticipated under 35 U.S.C. §102(e) by U.S. Patent No. 6,486,401 (Warhurst et al.). Claims 17 and 18 have been rejected as allegedly rendered obvious under 35 U.S.C. §103(a) from Warhurst et al. Claim 9 has been rejected as allegedly rendered obvious by the combination of Warhurst et al. and U.S. Patent No. 6,379,626 (Munson et al.) and U.S. Patent No. 6,103,199 (Bjornson et al.). Claim 16 has also been rejected as allegedly rendered obvious from the combination of Warhurst et al. and U.S. Patent No. 5,741,463 (Sanadi). Applicants respectfully traverse these rejections.

Applicants' invention is directed to a cover for a multi-well plate and to an assembly including a multi-well plate. The cover includes a lid having a curvilinear upper section and a compressible gasket attached to the underside of the lid. The lid includes integral side walls having structure for attaching the lid to the plate for securing the gasket on the multi-well plate, thereby sealing the wells formed in the plate. The curvilinear upper section of the lid has a concave shape in an initial, un-flexed position as viewed from above the plate, such that a convex contour, i.e. the underside of the lid, is positioned opposite the plate surface. As a result of the resilient property of the material from which the lid is constructed, when the concave-shaped lid is flexed, it provides a spring-clamping force which is transferred to the side walls in order to secure the lid to the plate surface by engaging a distal edge of the side-walls with the

underside edge of the plate. Thus, the lid has an initial un-flexed concave shape prior to securement to the plate, and a final, flexed shape after securement to the plate. The compression force created by flexing the lid is conveyed to the gasket -- which is mounted to the underside of the lid -- to sealingly engage the gasket across the open wells defined in the plate. In this manner, the contents in the wells are protected. It is also pointed out that the gasket is not adhered to the plate. Thus, the combined lid/gasket may be easily removed from the plate surface without leaving any residue of the gasket on the plate surface or carrying away from the plate any contaminant from the wells.

To focus more clearly on the novel features of the invention, independent claims 10 and 22 have now been amended to state that the curvilinear upper section of the lid has "a concave shape in an initial, un-flexed position" and that a downward force applied to the lid serves "to straighten the upper section to a final, flexed position whereby the lid is secured to the multi-well plate". These features are not, as is recited in the Office Action, merely method limitations which have no patentable weight. Rather, they are functional limitations which define what the lid does. There is nothing inherently wrong with defining some part of an invention in functional terms, and functional language does not, in and of itself, render a claim improper. *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971). Thus, a functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. See MPEP 2173.05(g).

U.S. Patent No. 6,436,351 (Gubernator et al.) Does Not Anticipate The Claims

Gubernator et al. discloses a microtitre chemical reaction system having a top cover 26 defining a plurality of holes 27 and which is disposed over a gasket 24, a gas distribution plate 22 and which is attached to a support rack 16. Retaining clips 28 depend from the side wall of the top cover 26. Each retaining clip 28 has an angled leading edge at a distal

end which is oriented inward. As shown in FIG. 1A, the retaining clips 28 are in their initial, i.e., rest, position. Also as shown in FIG. 1A, the dimension of the top cover is such that it snugly accommodates insertion of the support rack 16. In other words, and as shown in FIG. 2, the inner surface of the clips 28 are proximate the side walls of the support rack, such that the leading edges of the clips snap into the notches 21 in the support rack. As is evident from the completed assembly shown in FIG. 2, when the top cover 26 is pushed down over the support rack, the clips, as a result of their leading edges, will bend and pivot outward from their initial rest position along each clip's attachment point, until the leading edges reach the notches 21. At that point, the clips will snap into the notches 21 to secure the top cover 26 to the plate 22. The initial and final orientations of the clips are identical or, at least substantially identical. As a direct result of the configuration, the orientations of the upper surface of the top cover 26 with respect to the upper surface of the support rack 16 is the same before and after the top cover is attached. Gubernator et al., therefore, does not teach or suggest a lid with an upper section "having a concave shape in an initial, un-flexed position" which becomes straightened in "a final, flexed position" when the lid is secured to the multi-well plate. To the extent there is any "flexing" action in the Gubernator device, this is limited to movement of the retaining clips from an initial un-flexed position to a final un-flexed position. Accordingly, the claims, as now amended, are not anticipated by Gubernator et al.

U.S. Patent No. 6,486,401 (Warhurst et al.) Does Not Anticipate The Claims

Warhurst et al. discloses a multi-well plate assembly having a discontinuous cover 20 and spring wire legs 25 which are used to attach the cover to a multi-well plate 10 (see FIG. 3A and FIG. 3B). Although not specifically described in Warhurst, the figures clearly show that the spring wire legs 25 are rotatably mounted within channels formed at the side edges of the

cover. As the spring legs 25 are rotated from the position shown in FIG. 3A to the position shown in FIG. 3B, tabs 29 are engaged to secure the spring wire legs in place. As a result of the rotation of the spring wire legs 25 with respect to the cover 20, and even assuming that the upper cover 20 is made of flexible material as is pointed out on page 10, last two lines of the Office Action, the upper surface of the cover is not manipulated in any way by rotation of the legs to the plate. In other words, the cover does not have "a concave shape in an initial, un-flexed position" and the spring arms do not "straighten the upper section to a final, flexed position" as is now recited in the independent claims 10 and 22.

These features are also not taught by the embodiment depicted in Warhurst FIGs. 16 and 17. As shown in that embodiment, spring arms 25' are attached at a center region to the cover 20'. In FIG. 16, the cover 20' and center regions of the spring arms are co-planar and the spring arms 25' are "opened", i.e., the ends of the spring arms are bent either upward or downward with respect to the common plane containing the cover 20' and the center regions of the spring arms. In FIG. 17, the spring arms 25' are "closed", wherein the ends of the spring arms 25' along with the cover 20' and the center regions of the spring arms are co-planar. There is no teaching that the cover 20' has a "concave shape in an initial un-flexed position". There is also no teaching that the spring arms straighten the upper section to a "final, flexed position". In fact, the initial and final positions of the cover 20' in Warhurst are identical with respect to the multi-well plate. Accordingly, Warhurst et al. does not anticipate the amended independent claims 10 and 22.

In addition to the foregoing, the combination of either Gubernator et al. or Warhurst et al., with each other or with any of the other cited references, does not teach or suggest the "cover" of amended independent claim 10 or the "assembly" of amended independent

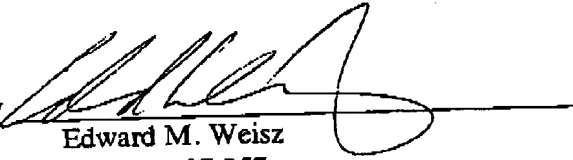
claim 22. Accordingly, it is respectfully submitted that the amended independent claims, and their respective dependent claims, are now in condition for immediate allowance.

It is believed that no fees or charges are required at this time in connection with the present application; however, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

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*Dedicated
to David B. Guralnik
lexicographical mentor and friend*

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